



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,003	12/02/2002	Rolf Larsson	C36465	6506

7590

07/30/2003

Orum & Roth
53 West Jackson Boulevard
Chicago, IL 60604-3606

EXAMINER

STONER, KILEY SHAWN

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/582,003

Applicant(s)

LARSSON, ROLF

Examiner

Kiley Stoner

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9 is/are rejected.
- 7) ☒ Claim(s) 7, 8 and 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14. 6) ☐ Other:

Art Unit: 1725

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on 12-19-97. It is noted, however, that applicant has not filed a certified copy of the 97850179.9 application as required by 35 U.S.C. 119(b).

On 7-22-03 the applicant faxed the Examiner copies of EP-0928659A1 and WO 99/32254. These are not certified copies of the priority document.

WIPO informed the Examiner that a certified copy of the priority document was not filed in the international phase. So, at this time the earliest priority date that the Examiner can assign to the case is 12-15-98 from PCT/SE98/02302.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (WO 97/48517) in view of Martin et al. (6,045,028). Larsson teaches a work-table (#7), clamping means (#5-6); and a welding unit comprising a friction stir head (#12); a milling unit (claim 1); the milling unit comprises a milling head that is separate from the friction stir welding head (claim 3); the milling unit is formed by the

friction stir welding head (claim 2); the milling unit consists of milling head which is separate from the friction stir welding head and of a friction stir welding head fitted with a milling tool (page 4, lines 7-13; and claims 2-4);. Larsson does not teach that the welding unit comprises a friction stir welding head and a fusion welding head.

Martin et al. teaches tack welding a metal strip to the workpieces prior to friction stir welding (Figures 4A-4B; column 2, lines 15-17 and column 5, lines 26-29). Tack welding in the welding art is done by fusion welding techniques such as GTAW, GMAW, RSW and LBW. Therefore, Martin et al. teaches using the processes of fusion welding and friction stir together on the same workpiece. Thus, it is obvious that the fusion welding means and friction stir welding means could have been integrated into one apparatus in order to eliminate an unnecessary step of moving the workpiece from the fusion welding apparatus to the friction stir welding apparatus. In an integrated apparatus the workpiece would not have to be moved from one welding machine to another, thus increasing the efficiency of the welding process.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the fusion welding means and the friction stir welding means of Martin et al. with the friction stir welding apparatus of Larsson in order to reduce the number of positioning steps required to fusion weld (tack weld) and friction stir weld a workpiece, which would increase the efficiency of the process as discussed above.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (WO 97/48517) and Martin et al. (6,045,028) as applied to claim 1 above, and

further in view of Juengst et al. (5,484,315). Larsson and Martin do not teach a laser welding head, however, Martin does teach tack welding as discussed above and Larsson does teach a milling unit (claim 1). Juengst et al. teaches tack welding with a laser welding head (column 8, line 63-column 9, line 15). At the time of the invention it would have been obvious to combine the laser tack welding head of Juengst et al. with the tack welding of Martin and the friction stir welding apparatus of Larsson in order to form an integrated friction stir welding device with a laser tack welding head that would be capable of fusing the components together prior to the subsequent friction stir welding process.

Allowable Subject Matter

Claims 7-8 and 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art of record does not teach or suggest either alone or in combination a welding apparatus as recited by claims 7 and 10-14, particularly the work-table comprises at least one backing and each workpiece is clamped to the backing by means of the separate clamping means, wherein the backing consists of at least two parts which are arranged for relative movement to one another.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiley Stoner whose telephone number is (703) 305-0723. The examiner can normally be reached on Monday-Thursday (7:30 a.m. to 6:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on Monday-Friday. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kiley Stoner A.U. 1725

Kiley Stoner 7-22-03